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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/982,558	10/17/2001	Bulent M. Basol	42496/269243 NT-213(U)	7745

7590 05/15/2003  
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McLean, VA 22102

EXAMINER

NICOLAS, WESLEY A

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 05/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/982,558

Applicant(s)

BASOL ET AL.

Examiner

Wesley A. Nicolas

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-92 is/are pending in the application.
- 4a) Of the above claim(s) 42-67, 76-78 and 82-92 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 68-75 and 79-81 is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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**DETAILED ACTION**

This is in response to the response to restriction requirement dated March 25, 2003. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-92 are currently pending in this application, with claims 42-67, 76-78, and 82-92 being withdrawn from further consideration as being drawn to a non-elected invention.

***Election/Restriction***

1. Claims 42-67, 76-78, and 82-92 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **with** traverse in Paper No. 8.

Since Applicant has not provided express admission that the claimed inventions are indistinct as required by Lee, the restriction as set forth in the previous Office action has been maintained. In re Lee, 199 USPQ 108 (Deputy Asst. Comm'r. for Pats 1978). Accordingly, the restriction requirement as set forth in the previous Office action is hereby being made **FINAL**.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Skrovan (6,203,413), and further in view of Sun et al. (6,299,741).

Skrovan teaches a method of processing that includes conditioning a workpiece surface influencing device (Abstract: "conditioning polishing pads"), the method comprising:

- operating upon the workpiece (Fig. 2, numeral 12) using the solution (Fig. 2, numeral 42) in the mechanical process, with the workpiece surface influencing device being disposed in proximity to the workpiece for a period of time during the mechanical process (Fig. 2, numeral 166; and Fig. 2, numeral 12), the electrochemical mechanical process also resulting in accumulation of particles onto the workpiece surface influencing device (col. 5, lines 8-9: "remove residual matter"); and
- conditioning the workpiece surface influencing device before performing another mechanical process (Fig. 2, conditioning device 166 performing work on pad 40), the conditioning resulting in one of a number of accumulated particles being reduced

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and the size of the accumulated particles being reduced (col. 5, lines 8-9: "remove residual matter").

Skrovan fail to specifically teach that the workpiece surface influencing device is used during at least a portion of at least one electrochemical mechanical process that operates upon a workpiece using a solution.

Sun et al. teach of an electrochemical mechanical process where a workpiece is operated on (Abstract) and where additional electrochemical mechanical processes are performed (Fig 4, multiple heads).

Claims 1-9, 25-26, and 30 are rejected because it would have been obvious and within the ordinary skill in the art at the time the invention was made to have modified the Skrovan invention to perform an electrochemical mechanical process as taught by Sun et al. because Sun et al. teach that it is common to perform multiple (Fig. 4, multiple heads) electrochemical mechanical etching processes on substrates (Abstract) which provides for uniform substrate thickness (col. 2, lines 40-45).

Claim 10 is rejected because Skrovan teaches that the particles that are reduced in the step of conditioning are non-conductive particles (col. 4, lines 48-50: "diamond particles").

Claims 11 and 32 are rejected because Skrovan teaches that the step of conditioning includes: applying a potential difference between an electrode and a conditioning member (col. 5, lines 10-22).

Claims 12-13 and 33-34 are rejected because it would have been obvious and within the ordinary skill in the art at the time the invention was made to have modified

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Skrovan to perform either deposition or etching as taught by Sun et al. because Sun et al. teach of etching (col. 2, lines 64-67: "AEP") and electroplating (col. 1, line 65: "electroplating") which would have increased the efficiency of the process by performing multiple process steps using the same apparatus.

Claims 14, 17, 35, and 39 are rejected because Skrovan teaches that the step of conditioning further includes establishing frictional mechanical contact between the workpiece surface influencing device and the conditioning member (col. 4, lines 24-36).

Claims 15 and 37 are rejected because Skrovan teaches that the step of conditioning rotates the conditioning member against the workpiece surface influencing device (Fig. 2, arrows "E" and "A").

Claims 16 and 38 are rejected because Skrovan teaches that the step of conditioning moves the conditioning member in a lateral direction against the workpiece surface influencing device (Fig. 2, arrows "E" and "A").

Claims 18 and 40 are rejected because Skrovan teaches that the step of conditioning rotates the conditioning member against the workpiece surface influencing device (Fig. 2, arrows "E" and "A").

Claims 19 and 41 are rejected because Skrovan teaches that the step of conditioning moves the conditioning member in a lateral direction against the workpiece surface influencing device (Fig. 2, arrows "E" and "A").

Claims 20-24 is rejected because the claims are considered to be a duplication of parts and the courts have held that mere duplication of parts has little patentable

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significance unless new and unexpected results are produced. In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960).

Claim 27-29 is rejected because the reduction of particles is considered to be an inherent characteristic in the pad conditioning member because similar processes can reasonably be expected to yield products which inherently have the same properties. In re Spada, 15 USPQ2d 1655 (CAFC 1990).

Claim 31 is rejected because Skrovan teaches that the steps of removing and bringing both use a holder, and the holder holds the workpiece during the step of operating and the holder holds the conditioning member during the step of conditioning (Fig. 2, numeral 162).

Although Skrovan is silent with respect to the use of brushes, claim 36 is rejected because the use of brushes would have been obvious and within the ordinary skill in the art at the time the invention was made because the specific makeup of the conditioning member would have been a result effective variable depending on the type of conditioning being performed, the substrate, and the pad because it is well known that brushes would tend to remove particle agglomeration from the pad surface whereas the diamond pad of Skrovan would perform more abrasive functions to the pad surface.

#### **Allowable Subject Matter**

5. Claims 68-75 and 79-81 are allowed over the prior art of record.

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6. The following is a statement of reasons for the indication of allowable subject matter:

The specific method of processing a workpiece surface influencing device which includes depositing, via a plating solution, a first conductive material onto a workpiece and moving a conditioning member having at least one mechanical contact member against the top surface of the workpiece surface influencing device was not taught or suggested by the prior art of record. The terms "deposited" and "plating" are limited to those enabled by the specification, namely electrochemical deposition/plating.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. 6,343,977 (Pent et al.) - Peng et al. teach of a pad conditioner.



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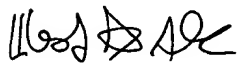
**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wesley Nicolas whose telephone number is (703)305-0082. The examiner can normally be reached on Mon.-Thurs. from 7am to 5pm.

The Supervisory Primary Examiner for this Art Unit is Roy King whose telephone number is (703) 308-1146.

The fax number for this Group is (703) 872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.



Wesley A. Nicolas

May 13, 2003